

CRITT MDTS

9 Rue Claude Chretien
08000 CHARLEVILLE MEZIERES
France

FOR THE ATTENTION OF

Caroline DEFONTAINE Directrice Technique
Clotilde GAILLIOT Responsable QSE

CERTIFICATE PREPARED BY
PINTO MONTEIRO Micael

YOUR QTML FOCAL POINT
PINTO MONTEIRO Micael

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DATE
27/11/2020

OUR REFERENCE
SUR2020.0085 Ind. D

ARP-ID of the External Shop
150147

TYPE of External Shop
Independent

Attestation letter for Qualification on Test Methods

Dear Madam, Dear Sir,

We herewith inform that the couples <Test Methods / External Shop> as detailed in the Appendix have been either registered or modified in the Official Airbus Qualified Test Methods List (QTML).

The latest valid status of all qualified <Test Methods / External Shop> couples is published by regular QTML reports:

- On Airbus homepage for Suppliers (<https://www.airbus.com/be-an-airbus-supplier.html>) - Only Independent Labs.
- On Airbus Supply Portal A2QS - All External Shops.

A qualified couple is not linked to a specific product. It is the proof that the External Shop is meeting the requirement of the M20691.2: Perform Couple <Product/Supplier Site> Compliance and Maturity's Activities for Material Products Suppliers and/or M20691.3: Perform Couple <Product/Supplier Site> Compliance and Maturity's Activities for Aerostructure Parts Suppliers.

- On a quality aspect: we kindly ask you to indicate us any modification which could have a quality impact.
- Concerning technical requirements:
 - * We kindly ask you to participate at least every 2 years to the PTP for the tests you perform on Airbus Products (see Appendix for details on next PTP participation requirements).
You can find all necessary information about PTP participation process on the website: <https://ptpscheme.com>.
In case of PTP results out of tolerances, the couples qualification can be downgraded to an authorisation to proceed or withdrawn and the PTP participation frequency is reduced to one year, subject to acceptance by Airbus of your Root Cause Analysis and associated Corrective Actions.
 - * On the other hand, you shall supply at least every 2 years the results of your Internal Homogeneity Studies per Test Families.

Airbus reserves the right to withdraw or suspend the qualification at any time for specific reason, e.g.

- Any major incident(s) detected on one or several Test processes
- Lack in quality
- Evidence non-compliance with the M20691.2 and/or M20691.3
- Loss of Airbus Supplier Approval
- Stop of the Business

Yours faithfully,

PINTO MONTEIRO Micael
Airbus Test Methods Auditor POMDS – CE
Your QTML Focal Point



SAUX Alexandra
Test Methods Coordinator POMDS– CE
Your Quality Responsible



Appendix: Matrix of qualified Couples <Test Methods / External Shop>

APPENDIX: Matrix of qualified Couples <Test Methods / External Shop>

We hereby declare the External Shop:

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Test Standard(s) *	Test label	Complex.	Qualif. Status	Next PTP part. **	QCS Ref.	Remark
AMS 2315	Determination of delta ferrite content	Low	Qualified			Stainless steel
ASTM A262	Standard practices for detecting susceptibility to intergranular attack in austenitic stainless steels	Low	Qualified with limitations			Only methods A and E
ASTM B117	Standard practice for operating salt spray (Fog) apparatus	Low	Qualified	2022		All metallic materials and painting
ASTM B557	Tension Testing Wrought and Cast Aluminum- and Magnesium-Alloy Products	Low	Qualified	2022		Steel, stainless steel, titanium alloys, cobalt alloys, aluminium alloys
ASTM E1019	Standard Test Method for Determination of Carbon, Sulfur, Nitrogen, and Oxygen in Steel, Iron, Nickel, and Cobalt Alloys by Various Combustion and Fusion Techniques	Low	Qualified	2021		Carbon in Nickel-Titanium based alloys (Nitinol type)
ASTM E112	Determining average grain size	Low	Qualified	2021		All metallic materials
ASTM E1409	Determination of oxygen and nitrogen in titanium and titanium alloys by the inert gas fusion technique	Low	Qualified	2021		Titanium alloys
ASTM E1447	Determination of hydrogen in titanium and titanium alloys by inert gas fusion thermal conductivity / infrared detection method	Low	Qualified	2021		Titanium alloys
ASTM E3	Standard guide for preparation of metallographic specimens	Low	Qualified			All metallic materials
ASTM E340	Macroetching metals and alloys	Low	Qualified			All metallic materials
ASTM E407	Microetching metals and alloys	Low	Qualified			All metallic materials
ASTM E45	Determining the inclusion content of steel	Low	Qualified	2022		Steel
ASTM E8	Tension testing of metallic materials	Low	Qualified	2022		Steel, stainless steel, titanium alloys, cobalt alloys, aluminium alloys
EN 2002-1	Tensile testing at ambient temperature	Low	Qualified	2022		Steel, stainless steel, titanium alloys, cobalt alloys, aluminium alloys
EN 2003-10	Titanium and titanium alloys - Part 10: Sampling for determination of hydrogen content	Low	Qualified	2021		Titanium alloys

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EN 2003-9	Titanium and titanium alloys - Part 9: Determination of surface contamination (method A: Micrographic examination / Method B: Hardness testing)	Low	Qualified with limitations	2022		Titanium alloys Method A
EN 3114	Microstructure of ($\alpha + \beta$) titanium alloy wrought products	Low	Qualified			Titanium alloys
ISO 148-1 (low temp.)	Charpy pendulum impact test (low temperature)	Low	Qualified	2022		Steel
ISO 148-1 (room temp.)	Charpy pendulum impact test (ambient temperature)	Low	Qualified	2021		Steel
ISO 1518	Paints and varnishes - Scratch test	Low	Qualified with limitations			Restricted to Part 2 Painting
ISO 1519	Paints and varnishes - Bend test (cylindrical mandrel)	Low	Qualified			Painting
ISO 2409	Paints and varnishes - Cross-cut test	Low	Qualified	2022		Painting
ISO 2808	Paints and varnishes - Determination of film thickness	Low	Qualified	2022		Painting
ISO 2812-2	Paints and varnishes - Determination of resistance to liquids - Part 2: Water immersion method	Low	Qualified	2022		Painting
ISO 2813	Paints and varnishes - Determination of specular gloss of non-metallic paint films at 20°, 60° and 85°	Low	Qualified			Painting
ISO 3651-2	Determination of resistance to intergranular corrosion of stainless steels - Part 2: Ferritic, austenitic and ferritic-austenitic (duplex) stainless steels - Corrosion test in media containing sulfuric acid	Low	Qualified			Stainless steel
ISO 3887	Steels - Determination of depth of decarburization	Low	Qualified	2021		
ISO 6270-2	Paints and varnishes - Determination of resistance to humidity - Part 2: Procedure for exposing test specimens in condensation-water atmospheres	Low	Qualified			Painting
ISO 643	Steels - Micrographic determination of the apparent grain size	Low	Qualified	2021		All metallic materials
ISO 6506	Metallic materials - Brinell hardness test	Low	Qualified	2022		All metallic materials

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ISO 6507	Metallic materials - Vickers hardness test	Low	Qualified	2021		All metallic materials Macro and Micro-hardness
ISO 6508	Metallic materials - Rockwell hardness test	Low	Qualified	2021		All metallic materials
ISO 9227	Corrosion tests in artificial atmospheres - Salt spray tests	Low	Qualified	2022		All metallic materials and painting
Z_Metal. Spec. prep	Metallic specimen preparation (for mechanical testing)	None	Qualified			Steel, stainless steel, cobalt, aluminium, nickel, titanium alloys (internal range) Also according to ISO 377 - Steel and steel products — Location and preparation of samples and test pieces for mechanical testing
Z_Opt. metallo.	Optical metallography	None	Qualified			All materials and plasma coatings Internal method (MO-MET-07-02) by colour threshold or customer's specification
Z_Physical tests	Various physical tests	None	Qualified			INEL X-rays diffractometer - Retained austenite: internal method (MO-MIC-06) - Steel IPSEN heat treatment furnace - Heat treatments of specimens according to internal method (CO-TTH-21) and customer's specifications - Steels, Ti
Z_Spectro	Analysis by spectrometry (others)	None	Qualified	2021		X-ray fluorescence spectrometry (internal method MO-ANA-27) Titanium, cobalt and nickel alloys
Z_Spectro	Analysis by spectrometry (others)	None	Authorised to Proceed March 2021	2021		Cu, Fe, Mg, Mn, Si, Ti, Zn in aluminum 6061 Cr determination in atp until March 2021 Emission spectrometry by spark (internal method MO-ANA-01) Steel, aluminium, nickel and cobalt alloys

* Unless otherwise specified, last issue of the standard shall apply.

** Next PTP participation year is given for information - It is the External Shop's responsibility to check every year on the PTP Website (<https://ptpscheme.com/>) which kits are proposed.